

STOPPAGE OF WORKS.—A WORD FOR THE WORKMAN.

THE remarks which have appeared in our journal on the unwise and unjust stoppage of works by Government, adding hundreds to the number of suffering operatives, have been loudly responded to in many quarters. Our brethren of the press gave increased circulation to them, thus showing an appreciation of the truth of what was said; and Government, if they are wise, will not disregard the statements. "Men cannot starve, and our wives and children struggling with all the privations of destitution, and not feel that their existence ought to be one of the cares of the Government." Instead of suspending works at such a moment,—works, too, of utility, of necessity,—they should rather increase them. If economy must be practised (and let us tell them that it must be; the nation have said it, and the nation will see it carried out), let it be at the expense of those who are receiving their thousands a year for doing nothing,—not to the ruin, body and soul, of the poor artisan, to whom want of employment is destruction. The powerful satirist *Punch*, last week, taking up our words, showed in clear colours, by a dozen lines, the selfishness of the proceeding. It would be easy to show that it is both wicked and shortsighted. Earnestly we exhort the Woods and Forests to reconsider the subject.

A correspondent writes us on the subject as follows, with the view of leading the master-builders to provide a protection for the workmen against such occurrences:—

Nopeing in a recent number of your journal some remarks on the sudden dismissal of workmen, I am induced to trouble you with this letter, in the hope of seriously calling the attention of the master-builders to this subject.

Among the grievances of which workmen have to complain, none are so prominent as that resulting from the sudden and capricious suspension of works. Large bodies of men are called together—probably many miles from their homes—and are frequently dismissed at a moment's notice, no previous intimation having been made, nor the least consideration shown for their sufferings and disappointment. Builders' workmen suffer sufficiently from frosty and rainy seasons, and are seldom employed, on the average, more than nine months out of the twelve, without being exposed to loss from the sudden break-up of works, when they have travelled many miles from home to serve their employer. This common indifference to the interests and feelings of the working-man, coupled with other circumstances, renders him disaffected towards his master and the state—regarding his employer as a person only thinking of the increase of his wealth by the talent and sweat of the brow of the poor.

The idle Monday that usually follows the sudden dismissal of the Saturday night is often the ruin of the workman. The bitterness of disappointment engendered by sudden dismissal, after days of zealous and anxious toil, makes the heart sick. Take the case of a working man, of industrious and sober habits, with a wife and three or four children, one who has been out of employment a long winter, and who has spent all his savings, and parted with many of his goods and chattels to support his family. He leaves London for a country job, and after a few weeks' work, the job being large, and likely to last the summer, he arranges for his wife and children to join him. He has no sooner done this than the next Saturday is fatal to his hopes; the works are stopped, and he is sent "about his business." No notice, not even a day's warning, given to him, so that he might have the opportunity during hours of communicating with his old mates, in town or elsewhere, on the subject of fresh employment. Now, this is a common case, and the workman so treated feels that he is made use of as a garment, and when done with cast aside and forgotten.

I know it will be urged that it is impracticable to avoid, at all times, the circumstances of which I complain;—this I deny. It is perfectly as easy for contractors to make such terms with their employers in this respect, as it is to make terms to protect themselves from loss upon plant and materials by such stoppages.

It would be well for contractors to consider these matters, and to estimate properly the value of the respectful bearing of the working-man, particularly now, as a bad spirit is abroad and doing its work with man; and during the late apprehended Chartist disturbances many terrible expressions fell from working men, which showed how keenly their wrongs rankled within them. Carpenters, bricklayers, plasterers, painters, decorators, &c., all are now the servants of the one master, the builder; and workmen in these branches feel how small their chances are of raising their condition without the aid of capital. The old guilds for the regulation of trades exist but in name, and no longer protect the workman from the grasp of the monopolist.

It is impossible in a letter, or many letters, to speak of the thousand ills workmen are subject to from want of a little forethought on the part of their employers. The majority of builders are persons in reality in advance of the other orders of society, but they are so hurried in their daily avocations by the spirit of competition, that the only impulse manifest in their conduct is that of completing their work with satisfaction to the architect, and meeting their money engagements. There is a want of unity among them, and it is that which prevents any great good being effected for those upon whose labour they depend.

There are no working men so well informed, so orderly, or so well conducted as the building workmen. The science they are attached to begets order, even in those who are its humblest handmaids, and by only a little, a very little effort on the part of the great builders, the condition of the building workmen might be improved beyond that of almost any other class, and the arts thereby advanced.

THE ATMOSPHERIC RAILWAY SYSTEMS.

NEGATIVE AND POSITIVE, OR EXHAUSTIVE AND COMPRESSIVE.

THE misgivings with which we have from the outset noted the boasted progress of the atmospheric system on the only modifications of the principle yet attempted in practice, have been recently more than justified on the South Devon line, where, as Sir W. S. Harris, of Plymouth, in his evidence on the Exeter and Crediton, evidences, it "is eternally stopping, and, in his opinion, is utterly incapable of practical or commercial utility." The valve, of course, and the sealing composition, are the sores which require perpetual healing and doctoring: and it is not by catching cold in the midst of frost and snow alone that the windpipe thus gets out of order; for no sooner have the stillness of frost and the shush of snow in winter given place to the drying breeze of spring and the melting heat of summer, than the wind and the dust do the work of the frost and snow, in as pertinacious attack on its tender organism, by drying and clogging its sealing material in place of freezing it, thus as effectually deranging the working of the line, if not, too, the patience and the wits of its officials. In order to obviate the evils resulting from the influence of wind and dust on the sealing composition, and otherwise to improve the longitudinal valve, a correspondent, Mr. G. C. Warren, proposes that the slit or valve be made of vulcanised Indian rubber, fixed into a deep groove on one side, so as to be compressible into that groove by the piston-rod, and to issue out of it again by its own elasticity, while the free edge slips out of and into a shallower groove on the opposite side as the rod runs along, thus affording the requisite protection to the sealing material. The opening edge of the valve he proposes to tip with leather, rendered supple with sealing material, and the bottom of the shallow groove in which it works, he adds, might be lined with a slip of vulcanised rubber, or also with supple leather. The rubber, as he remarks, will not be affected by changes of temperature; but will not its elasticity afford too great a probability of its being sucked into the vacuum altogether, sealing compositions notwithstanding? Otherwise, however, our correspondent's suggestion is well worthy of

consideration, if this sort, or any sort of valve is to be persisted in. An elastic steel valve, as our readers may recollect, was lately patented. The experimental line, on this plan, according to the patentees, has worked for some time both steadily and cheaply; and a new line is about to be laid down which they declare will work for a century without being in the least impaired. The inefficiency of Messrs. Clark and Samuda's principle has given rise to other and still more recent ingenious improvements, among which is that patented by Messrs. Harlow and Young, of Berrymondsey, in which the action of the valve is precisely similar to that of the slide valve of a steam engine, and all material of a more destructible nature is replaced by metal. Here, too, the coupler is not much thicker than the blade of a saw, the want of strength in thickness, we presume, being so far made up by breadth, and the slit being accordingly very narrow. The whole is thus also protected from grit, wet, snow, &c., by the top plates, between which the coupler connecting the piston with the leading carriage runs.

The atmospheric principle, as the correspondent, whose suggestion we have just noted, reminds us, in one we have regarded as a safe, or good one, even if rightly applied to railway lines, but we hope he does not thereby consider us committed entirely to the longitudinal valve. Indeed, the two most ingenious, if not most feasible schemes we recollect of, had no such valves. In the one, a needle threaded its way through a series of short recurring valves, through which the communication between the interior of the tube and the exterior, and hence the impetus, was kept up. In the other, the power was "laid on" like gas or water through a main, with bilateral branches, to a double series of simple engines, with wheels along the line, through which the impetus was communicated to rails along the train, being, in fact, a complete inversion of the ordinary principle and mode of railway locomotion. And however complex or fanciful, or otherwise objectionable, such schemes may really be, or not be, they probably comprehend the germs of some future and better hope for the atmospheric ordinary or exhaustive principle, if none other prove successful. The renewed or sustained interest in this mode of railway propulsion, at this moment manifested in various quarters, is no doubt spurred into sustained vivacity, by the endless succession of fatal accidents on other lines, from which the atmospheric principle is naturally looked to as a redemption of at least as hopeful a character as anything to be expected from the present system of railway direction.

We have hitherto talked exclusively of the power of the atmospheric vacuum, or what may be called the negative or exhaustive system; but the model of a line to be worked compressively, as we may term it, upon the atmospheric system, has been laid down near the Rosemary Branch at Pen Glance. The valve in this case is a longitudinal one, formed of vulcanised caoutchouc, with grooves, apparently arranged on the plan proposed by Mr. Warren for adaptation to the Devon, though it works by exhaustion. The tube is only half the size and weight of that of the latter. Four hundred and fifty feet of it have been laid down by the patentees; but the air, which is compressed by a Cambrian engine, with air pumps, into a reservoir at one end of it, only acts on 200 feet of the tube, the piston being there arrested in its course, and the carriage running on by the momentum obtained. A writer in the *Mining Journal* speaks rather favourably of its performance. The air, in each experiment he witnessed, was compressed to about 30 lbs. on the inch square; and the propelling power, in a tube 2½ inches in diameter, was thus 147 lbs., on a carriage of 5 cwt., loaded with pig iron to rather more than a ton, and propelled up an incline of 1 in 30 at the termination of the tube.

Between longitudinal valves, then, and no valves at all, and between air acting by compression, and the same agent acting by exhaustion, surely something will come out of it, although, in the meantime, we can see no one quite unobjectionable realisation of an idea even already pretty well turned over, if not tortured, in the various ingenious endeavours already made to turn it to account.

* If otherwise practicable, and friction sufficiently tolerable, might not any leakage from the opening before and behind the piston-rod on this plan, be prevented by a properly shaped washer of vulcanised rubber on the piston-rod?